WE CLAIM:

1. A system for cutting material comprising

a saw machine having a pusher for pushing a work piece down a processing path, and a sensor being positioned along the processing path to detect an end of a work piece as it translates down the processing path,

a computer connected to the saw machine and configured to calculate the length of the work piece based on the position of the pusher when the end of the work piece is sensed by the sensor.

2. The system of claim 1, wherein computer is programmed to calculate a plan for optimal cutting of the work piece to fulfill cut list requirements based on the length of the work piece.

3. The system of claim 2, further comprising

a source producing a light beam substantially parallel to the processing path, and a detector connected to the computer and configured to detect the light beam, wherein deflection of the light beam can be interpreted by the computer to locate a defect boundary on the work piece.

4. The system of claim 3, further comprising an audible or visible signal mechanism indicating completion of a marking event by deflection of the light beam.

5. The system of claim 3, wherein the saw machine has a marking station adjacent and parallel to a cutting station, the computer being programmed to allow execution of a cutting plan on a first work piece, while defects are being marked on a second work piece.

6. A method of cutting material comprising

connecting a computer to a saw machine, the computer being programmed to optimize cutting of stock to satisfy a cut list,

operating a pusher to push a work piece along a processing path,

automatically sensing an end of the work piece,

determining the length of the work piece based on the position of the pusher when the end is sensed,

automatically calculating a plan for optimal cutting of the work piece to fulfill cut list requirements,

executing the plan including automatically pushing the work piece toward the saw, and cutting the work piece into one or more cut list parts.

7. The method of claim 1, further comprising

inputting location of a defect in the work piece into the computer prior to the calculating step.

8. The method of claim 1, wherein the operating, sensing, determining, calculating, and executing steps are all controlled by the computer.

9. The method of claim 2, wherein the inputting step includes the step of deflecting a light beam adjacent a defect boundary in the work piece.

10. A method of cutting material comprising

connecting a computer to a saw machine, the computer being programmed to optimize cutting of stock to satisfy a cut list,

operating a pusher to push a work piece along a processing path,

automatically sensing an end of the work piece,

determining the length of the work piece based on the position of the pusher when the end is sensed,

inputting location of a defect in the work piece into the computer,

automatically calculating a plan for optimal cutting of the work piece to fulfill cut list requirements based on the length and location of any defects on the work piece, and

executing the plan including automatically pushing the work piece toward the saw, and cutting the first piece of material into one or more cut list parts.

11. A method of cutting material comprising

connecting a computer to a saw machine, the computer being programmed to optimize cutting of stock to satisfy a cut list,

automatically determining the length of a work piece,

virtually marking a defect on the work piece,

automatically calculating a plan for optimal cutting of the work piece to fulfill cut list requirements based on the length of the work piece and location of the defect,

executing the plan including automatically pushing the first piece of material toward the saw, and cutting the first piece of material into one or more cut list parts.